10.1071/FPv41n12toc

Functional Plant Biology

Contents

Volume 41 Issue 12 2014

Cover illustration: Function of WRKY transcription factors in cellular defense during leaf rust infection in wheat (see Kumar *et al*. pp. 1295–1309). Image by Dhananjay Kumar.

Trunk girdling (horticultural practice used to increase fruit size) reduces vegetative shoot growth although there appears to be higher availability of carbohydrates above the girdle in girdled trees. This research indicates that early spring scaffold girdling decreased stem water potential above the girdle suggesting that early spring girdling not only influences phloem flow (that is interrupted by girdling) but also decreases xylem flow. The decreased stem water potentials appear to be directly related to reductions in vegetative shoot growth and explain why early spring girdling reduces shoot growth. It is hypothesized that early spring girdling affects xylem flow because the girdling process interrupts cambial activity and the production of new xylem however girdling may also influence root activity.